

Appl. No. : 10/732,992
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AMENDMENTS TO THE CLAIMS

1.-42. (Cancelled)

43. (Currently amended) An absorption solution comprising an absorbent consisting essentially of at least one alkali metal hydroxide, alkaline earth metal hydroxide, or a mixture thereof, and at least one heteropoly complex anion of a transition metal element present in an amount sufficient to provide a corrosion inhibiting effect wherein the alkali metal hydroxide, alkaline earth metal hydroxide or mixture thereof is present in an amount from about 20 to about 80 weight percent, based on the total weight of the solution.

44. (Original) The solution of Claim 43, further comprising at least one additional additive in an amount sufficient to provide a corrosion inhibiting effect.

45. (Original) The solution of Claim 43, wherein said at least one heteropoly complex anion comprises at least one transition metal atom having corrosion inhibiting properties in absorption refrigeration systems.

46. (Original) The solution of Claim 43, wherein said at least one heteropoly complex anion comprises a compound selected from the group consisting of $[XaMbOc]^{-n}$, $[XaZdMbOc]^{-n}$, $[XaZdMbOcHe]^{-n}$, $[XaMbOc(OH)f]^{-n}$, $[XaZdMbOc(OH)f]^{-n}$, and mixtures thereof, wherein:

X and Z are central heteroatoms selected from the group consisting of elements from Groups I-VIII of the Periodic Table of Elements;

a is 1 or 2;

d is an integer from 0 to 4;

MbOc, MbOcHe, and MbOc(OH)f are oxoanions in which M is a transition metal element; b is an integer from 5 to 22; c is an integer from 20 to 70; e is an integer from 0 to 6; and f is an integer from 0 to 3; and

n is the charge of the anion.

47. (Original) The solution of Claim 46, wherein:

X is phosphorus, silicon, manganese, tellurium or arsenic; and

M is molybdenum or tungsten.

48. (Original) The solution of Claim 43, wherein said at least one heteropoly complex anion is selected from the group consisting of phosphomolybdates, silicon molybdates,

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manganese molybdates, silicon tungstates, tellurium molybdates, arsenic molybdates, and mixtures thereof.

49. (Original) The solution of Claim 43, wherein said at least one heteropoly complex anion comprises a phosphomolybdate of the formula $[\text{PMo}_{12}\text{O}_{40}]^{-3}$.

50. (Original) The solution of Claim 49, wherein said at least one additional additive comprises at least one transition metal compound.

51. (Original) The solution of Claim 50, wherein said at least one transition metal compound is selected from compounds of transition metals which are capable of providing the transition metal element as ions in solution of alkali metal hydroxide, alkaline earth metal hydroxide, and mixtures thereof.

52. (Original) The solution of Claim 51, wherein said at least one transition metal compound comprises a transition metal which is different from the transition metal of the heteropoly anion complex.

53. (Original) The solution of Claim 50, wherein said at least one transition metal compound comprises a salt of transition metal element.

54. (Original) The solution of Claim 53, wherein said salt comprises a compound selected from the group consisting of nitrates, halides, and oxides of transition metal elements, and mixtures thereof.

55. (Original) The solution of Claim 53, wherein said transition metal is selected from the group consisting of cobalt, nickel, tungsten, zirconium, manganese, chromium, and mixtures thereof.

56. (Original) The solution of Claim 53, wherein said salt comprises a halide of a transition metal element.

57. (Original) The solution of Claim 44, wherein said at least one additional additive comprises at least one compound of the metallic elements of Groups IIIa to VIa of the Periodic Table of Elements.

58. (Original) The solution of Claim 57, wherein said at least one compound of the metallic elements of Groups IIIa to VIa of the Periodic Table of Elements comprises a compound capable of providing the metallic elements of Group IIIa to VIa as ions in alkali metal halide solutions.

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59. (Original) The solution of Claim 58, wherein said at least one compound of the metallic elements of Groups IIIa to VIa of the Periodic Table of Elements comprises at least one salt of a metallic element of Group IIIa to VIa.

60. (Original) The solution of Claim 59, wherein said salt comprises a compound selected from the group consisting of oxides, sulfides, halides, nitrates, and mixtures thereof of metallic elements of Group IIIa to VIa.

61. (Original) The solution of Claim 59, wherein said at least one compound of the metallic elements of Groups IIIa to VIa of the Periodic Table of Elements comprises a halide of a metallic element of Groups IIIa to VIa.

62. (Original) The solution of Claim 59, wherein said at least one compound of the metallic elements of Groups IIIa to VIa of the Periodic Table of Elements comprises antimony as the metallic element of Groups IIIa to VIa.

63. (Original) The solution of Claim 59, wherein said at least one compound of the metallic elements of Groups IIIa to VIa of the Periodic Table of Elements comprises a compound selected from the group consisting of antimony bromide, gennanium bromide, arsenic bromide, and bismuth bromide, and mixtures thereof.

64.-72. (Cancelled)

73. (Currently amended) An absorption solution for refrigeration systems, comprising an absorbent consisting essentially of at least one alkali metal hydroxide, alkaline earth metal hydroxide, or a mixture thereof, and at least one phosphomolybdate, and at least one transition metal halide, said phosphomolybdate and said transition metal halide present in an amount sufficient to provide a corrosion inhibiting effect ~~wherein the alkali metal hydroxide, alkaline earth metal hydroxide or mixture thereof is present in an amount from about 20 to about 80 weight percent, based on the total weight of the solution.~~

74. (Currently amended) The solution of Claim 73, wherein said phosphomolybdate is $[PMo_{12}O_{40}]_3[PMo_{12}O_{40}]_3$, and said transition metal halide is cobalt halide or nickel halide.

75. (Original) The solution of Claim 73, wherein said alkali metal hydroxide, alkaline earth metal hydroxide or mixture thereof is present in an amount from about 20 to about 80 weight percent, based on the total weight of the solution.

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76. (Currently amended) An absorption solution for refrigeration systems, comprising an absorbent consisting essentially of at least one alkali metal hydroxide, alkaline earth metal hydroxide, or a mixture thereof, and at least one phosphomolybdate, and at least one halide of the metallic elements of Group Va of the Periodic Table of Elements, said phosphomolybdate and said halide present in an amount sufficient to provide a corrosion inhibiting effect.

77. (Currently amended) The solution of Claim 76, wherein said phosphomolybdate is $[PMo_{12}O_{40}]_3[PMo_{12}O_{40}]_{-3}$, and said halide is antimony bromide ($SbBr_3$).

78.-92. (Cancelled)